

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Lee et al. Confirmation No.: 2121
Serial No.: 09/284,297 Art Unit: 1615
Filed: July 5, 2000 Examiner: Neil S. Levy
Customer No.: 21559
Title: METHOD OF PREPARING A POORLY CRYSTALLINE CALCIUM PHOSPHATE AND METHODS OF ITS USE

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

COMMUNICATION REGARDING INFORMATION DISCLOSURE STATEMENT

Applicants respectfully request acknowledgement from the Office that international patent application publication WO 94/08458, which was listed on page 3 of Form PTO-1449 filed with Applicants' Information Disclosure Statement ("IDS") on February 11, 2000, was considered. Applicants received an Office Communication dated December 6, 2007 (a copy of which is provided as Exhibit A¹), which stated that the publications listed on Applicants' February 11, 2000, Form PTO-1449 were considered by the Office on May 11, 2001, yet the Office did not initial next to WO 94/08458 to indicate that it was considered. Thus, Applicants provide a copy of page 3 of Form PTO-1449 (Exhibit B), and respectfully request that the Office initial next to WO 94/08458 to show that it has been considered and return the fully initialed Form PTO-1449 to Applicants with the next Office communication.

If there are any charges or any credits, please apply them to Deposit Account No. 03-2095.

Respectfully submitted,

Date: 15 July 2008

For Todd Clark
Paul T. Clark
Reg. No. 30,162

TODD ARMSTRONG, Ph.D.
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¹ An initialed copy of Applicants' February 11, 2000, Form PTO-1449 was also attached to the December 6, 2007, Office Communication and is included as part of Exhibit A.

EXHIBIT A



**UNITED STATES DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office**
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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
09284297	7/5/00	LEE ET AL.	04712/043002

EXAMINER

NEIL LEVY

ART UNIT	PAPER
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1615 20071206

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

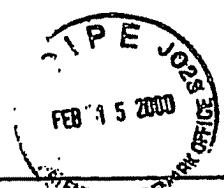
Attached is copy of IDS submitted 2/15/00, & considered on 5/11/01.

NEIL LEVY
Primary Examiner
Art Unit: 1615



Sheet 1 of 12

SUBSTITUTE FORM PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		Attorney Docket No.	04712/02000G		
				Serial No.	09/284,297		
				Applicant	Lee et al.		
				Filing Date	4/12/99		
				Group			
				IDS Filed			
(37 CFR §1.98(b))							
U.S. PATENTS							
Examiner's Initials	Patent Number	Issue Date	Patentee		Class	Subclass	Filing Date (If Appropriate)
<i>M</i>	5,605,713	02/25/97	Boltong				
<i>M</i>	5,152,836	09/12/91	Hirano				
FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION							
Examiner's Initials	Document Number	Publication Date	Country or Patent Office		Class	Subclass	Translation (Yes/No)
<i>M</i>	JP 06228011	12/12/94	Japan				Abstract only
<i>M</i>	JP 7277712	10/24/95	Japan				Abstract only
	JP 63111875	05/17/88	Japan				Abstract only
	WO 92/02453 ✓	07/05/91	PCT				
	WO 94/02412 ✓	02/03/94	PCT				
	WO 94/04657 ✓	08/12/93	PCT				
	WO 94/25080	11/10/94	PCT				
	WO 95/08319	09/23/94	PCT				
	WO 96/36562 ✓	05/20/96	PCT				
	WO 97/17285 ✓	11/07/96	PCT				
	WO 92/001009	01/09/92	PCT				
	WO 94/20064	09/15/94	PCT				
	EP 0 268 463	05/25/88	Europe				
	EP 0 347 028 ✓	11/18/89	Europe				
EXAMINER <i>Lee Oates</i>			DATE CONSIDERED <i>5/11/01</i>				
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with the next communication to applicant.							



Sheet 2 of 12

SUBSTITUTE FORM PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	Attorney Docket No.	04712/02000G
			Serial No.	09/284,297
			Applicant	Lee et al.
			Filing Date	4/12/99
			Group	
			IDS Filed	
(37 CFR §1.98(b))				
OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION)				
<input checked="" type="checkbox"/>	Appel et al. "Recent Advances in Implants for Bone Growth Promotion" <i>Exp. Opin. Ther. Patents</i> 4:1461 (1994)			
<input type="checkbox"/>	Aithanasou et al., "Current Concepts Review Cellular Biology of Bone-Resorbing Cells" <i>J. Bone and Joint Surg.</i> 78A:1096-1112 (1996)			
<input type="checkbox"/>	Hayes et al., "Augmentation of Cementless Femoral Stems to Improve Initial Stability Using a Remodelable Calcium-Phosphate Bone Material Substitute" 61 st Annual American Academy of Orthopedic Surgeons Meeting, New Orleans (02/94)			
<input type="checkbox"/>	Jang "Advanced Polymer Composites" Chapter 1, Introduction, <i>The Materials Information Society</i>			
<input checked="" type="checkbox"/>	Norian Corporation, Product Information Sheet, "The Material Science of Norian SRS™, Skeletal Repair System™"			
<input checked="" type="checkbox"/>	Rey et al., "Chemical Properties of Poorly Crystalline Apatites" <i>Phosphorus Res. Bull.</i> 6:67-70 (1996) abstract only			
EXAMINER <i>Neil Caw</i>	DATE CONSIDERED <i>5/11/01</i>			
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with the next communication to applicant				

Form PTO-1449
(REV. 8-83)U.S. Department of Commerce
Patent and Trademark OfficeAtty. Docket:
04712/02000GIn re Application No.
09/284,297

INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

FEB 15 2000

Applicant: Lee et al.

Filing Date:
4/12/99

Group:

U. S. PATENT DOCUMENTS

Examiner's Initials	U.S. Patent No.	Applicant	Issue Date	Class	Subclass
M	4,684,673	Adachi	August 4, 1987	523	116
	5,262,166	Liu et al.	November 16, 1993	424	423
	5,281,265	Liu	January 25, 1994	106	35
	5,427,754	Nagata et al.	June 27, 1995	423	308
	5,516,532	Atala et al.	May 14, 1996	424	548
	5,565,502	Glimcher et al.	October 15, 1996	523	115
	5,665,120	Ohtsuka et al.	September 9, 1997	623	16
	5,691,397	Glimcher et al.	November 25, 1997	523	115
	5,700,289	Breitbart et al.	December 23, 1997	623	16
M	5,782,971	Constanz et al.	July 21, 1998	106	690

FOREIGN PATENT DOCUMENTS

Examiner's Initials	Document No.	Country	Date	Translation	
				Yes	No
	WO 94/08458	International	April 28, 1994	✓	

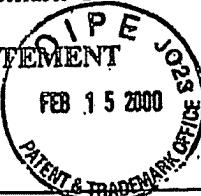
Examiner's Initials

OTHER DOCUMENTS
(Including Author, Title, Date, Pertinent Pages, Etc.)

M	Barton, et al., "Surface and Bulk Properties of Amorphous Calcium Phosphate", Colloid Interface Sci., 50th Proceeding Int'l Conf. 3:71(1976) CA:87:73954v
M	Basic, et al., "Electron Probe Microanalysis of Noncarious Enamel and Dentin and Calcified Tissues in Mottled Teeth", J. Dent. Res. 48: 131, Jan-Feb, 1969
M	Constanz, et al., "Skeletal Repair by in Situ Formation of the Mineral Phase of Bone", Science, 267:1976, (March, 1995.)

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5/18/07

Form PTO-1449 (REV. 8-83)		U.S. Department of Commerce Patent and Trademark Office	Auy. Docket: 04712/02000G	In re Application No. 09/284,297
INFORMATION DISCLOSURE STATEMENT				
(Use several sheets if necessary)				
				
Filing Date: 4/12/99 Group:				
<p><i>M</i></p> <p>Driessens, et al., "Calcium Phosphate Bone Cements", Encyclopedic Handbook of Biomaterials and Bioengineering, Wise (Eds) New York, Marcel Dekker, pp 855-877, 1995.</p> <p><i>V</i></p> <p>Ducheyne, et al., "Introduction to Bioceramic Composites", Bioceramics, Advanced Series in Ceramics, Volume I.</p> <p><i>M</i></p> <p>Eanes, "Thermochemical Studies on Amorphous Calcium Phosphate", Calc. Tiss. Res. 5:133 (1979)</p> <p><i>M</i></p> <p>Eanes, et al., "Intermediate Phases in the Basic Solution Preparation of Alkaline Earth Phosphates", Calcified Tissue Res. 2(1): 38 (1968)</p> <p><i>V</i></p> <p>Eanes, et al., "Intermediate States in the Precipitation of Hydroxyapatite", Nature, 208: 365, (October 1965.)</p> <p><i>M</i></p> <p>Fukase, et al., "Setting Reactions and Compressive Strengths of Calcium Phosphate Cements", J. Dent. Res 69(12): 1852, (December, 1990)</p> <p><i>M</i></p> <p>Gao, et al., "Established Competence of Bioactive Composite Bone Substitute on the Healing of Diaphyseal Segmental Defects in Sheep", Fifth World Biomaterials Congress, May 29-June 2, 1996, Toronto, Canada</p> <p><i>M</i></p> <p>Glimcher, "Recent Studies of the Mineral Phase in Bone and its Possible Linkage to the Organic Matrix by Protein-Bound Phosphate Bonds", Phil. Trans. R. Soc. Land. B 304: 479 (1984).</p> <p><i>M</i></p> <p>Glimcher, et al. "Recent Studies of Bone Mineral is the Amorphous Calcium Phosphate Theory Valid", Journal of Crystal Growth 53:100 (1981)</p> <p><i>M</i></p> <p>Graves, et al., "Resorbable Ceramic Implants", J. Biomed. Mater. Res. Symposium 2:91, (1971)</p> <p><i>M</i></p> <p>Greenfield, et al., "Formation Chemistry of Amorphous Calcium Phosphates Prepared from Carbonate Containing Solutions", Calc. Tiss. Res. 9: 152 (1972).</p> <p><i>M</i></p> <p>Hollinger, et al., "Role of Bone Substitutes", Clinical Orthopaedics and Related Research, 324: 55, (1996).</p> <p><i>M</i></p> <p>Horioglu, et al., "Long Term Follow-up of Hydroxyapatite Cement (HAC) Implants for Craniofacial Reconstruction", 21st Annual Meeting of the Society for Biomaterials, March 18-22, 1995, San Francisco, CA</p> <p><i>V</i></p> <p>Ishikawa, et al., "Effects of Preparation Conditions in Aqueous Solution on Properties of Hydroxyapatites", 9 (1):58 (1990) [CA 113:21868j]</p>				

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Form PTO-1449 (REV. 8-83)		U.S. Department of Commerce Patent and Trademark Office	Atty. Docket: 04712/02000G	In re Application No. 09/284,297
INFORMATION DISCLOSURE STATEMENT				
(Use several sheets if necessary)				
FEB 15 2000 RECEIVED U.S. PATENT AND TRADEMARK OFFICE				
Applicant: Lee et al.				
Filing Date: 4/12/99 Group:				
<p><i>M</i></p> <p>Kinoshita, et al., "Reconstruction of Mandibular Discontinuity Defects in Dogs Using Autogenic Particulate Cancellous Bone and Marrow and Poly (L-lactide) Mesh, Fifth World Biomaterials Congress, May 29-June 2, 1996. Toronto, CA</p>				
<p>Labarthe, et al., "Sur La Structure Et Les Proprietes Des Apatites Carbonatees De Type B Phospho-Calciques," Ann Chem. 8:289, 1973.</p>				
<p>Nylen, et al., "Molecular and Ultrastructural Studies of Non-Crystalline Calcium Phosphates", Calc. Tiss. Res. 9:95, 1972.</p>				
<p>Otsuka, et al., "Effect of Particle Size of Metastable Calcium Phosphates on Mechanical Strength of a Novel Self-Setting Bioactive Calcium Phosphate Cement", Journal of Biomedical Materials Research, 29:25 (1995)</p>				
<p>Pool, "Coral Chemistry Leads to Human Bone Repair", Science 269:1772 (March, 1995).</p>				
<p>Posner, et al., "Synthetic Amorphous Calcium Phosphate and its Relation to Bone Mineral Structure", Bone Mineral Structure, 8:273 (1975)</p>				
<p>Rey, et al., "Preparation of Microporous Ceramic at Low Temperature From Poorly Crystalline Apatite", Symposium Abstract, 1993.</p>				
<p>Rey, et al., "Structural Studies of the Mineral Phase of Calcifying Cartilage", J. Bone Min. Res. 6:515, 1991.</p>				
<p>Rey, et al., "The Carbonate Environment in Bone Mineral: A Resolution-Enhanced Fourier Transform Infrared Spectroscopy Study, Cal. Tissue Int. 45:157-164, 1989.</p>				
<p>Termine, et al., "Amorphous/Crystalline Interrelationships in Bone Mineral", Calc. Tissue. Res. 1:8</p>				
<p>Tung, et al., "An Intermediate State in Hydrolysis of Amorphous Calcium Phosphate", Calc. Tissue Int. 35:784, 1983.</p>				
<p>Yasue, et al., "Effect of Adsorption of Succine Acid on the Formation of Amorphous Calcium Phosphate, International Edition, 102(12):1122(1994)</p>				
EXAMINER	<i>Lee</i>		DATE CONSIDERED <i>5/11/01</i>	
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.				

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		Filing Date 4/12/99	Group		
U. S. PATENT DOCUMENTS					
Examiner's Initials	U.S. Patent No.	Applicant	Issue Date	Class	Subclass
<i>AC</i>	Re. 33,161	Brown et al.	Feb. 6, 1990	423	308
<i>J</i>	Re. 33,221	Brown et al.	May 22, 1990	423	308
	4,157,378	Tomlinson et al.	June 5, 1979	423	301
	4,612,053	Brown et al.	Sep. 16, 1986	706	35
	4,737,411	Graves, Jr. et al.	Apr. 12, 1988	428	403
	5,427,754	Nagata et. al	Jun. 27, 1995	423	308
	4,429,691	Niwa et. al	Feb. 7, 1984	128	92
<i>N</i>	4,849,193	Palmer et. al.	Jul. 18, 1989	423	308
<i>M</i>	4,880,610	Constantz	Nov. 14, 1989	423	305
	4,917,702	Scheicher et al.	Apr. 17, 1990	623	16
	4,938,938	Ewers et al.	July 03, 1990	423	308
	4,959,104	Iino et al.	Sep. 25, 1990	106	85
	5,034,059	Constantz	Jul. 23, 1991	106	161
	5,037,639	Tung	Aug. 6, 1991	424	57
	5,047,031	Constantz	Sep. 10, 1991	606	77
	5,053,212	Constantz et al.	Oct. 1, 1991	423	305
	5,085,861	Gerhart et al.	Feb. 4, 1992	424	78.17
	5,129,905	Constantz	Jul. 14, 1992	606	76
	5,149,368	Liu et al.	Sep. 22, 1992	424	602
	5,164,187	Constantz et al.	Nov. 17, 1992	424	423

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Form PTO-1449 (REV. 8-83)		U.S. Department of Commerce Patent and Trademark Office	Atty. Docket 04712/02000G	In re Application No. 09/284,297	
			Applicant: Lee et al.		
			Filing Date 4/12/99	Group	
				423	305
		5,178,845	Constantz et al.	Jan. 12, 1993	
		5,279,831	Constantz et al.	Jan. 18, 1994	424
		5,286,763	Gerhart et al.	Feb. 15, 1994	514
		5,336,264	Constantz et al.	Aug. 9, 1994	623
		5,470,803	Bonfield et al.	Nov. 28, 1995	501
		5,496,399	Ison et al.	Mar. 5, 1996	106
		5,522,893	Chow et al.	June 4, 1996	623
		5,525,148	Chow et al.	Jun. 11, 1996	106
		5,542,973	Chow et al.	Aug. 6, 1996	35
		5,545,254	Chow et al.	Aug. 13, 1996	35
FOREIGN PATENT DOCUMENTS					
Examiner's Initials	Document No.	Country	Date	Translation	
				Yes	No
	WO 94/02412	PCT	Jul. 7, 1995	✓	
	EP 0664133	Europe	Feb. 3, 1994	✓	
	JP 2-182261	Japan	Jul. 16, 1990		
	JP 5-305134	Japan	Jul 5, 1993		
	JP 63170205 (Abstract)	Japan	July 14, 1988	✓	
Examiner's Initials	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)				

Meel Lee 5/11/01

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M	Gao, T.J. "Established composite Bioactive Composite Bone Substitute on the Healing of Diaphyseal Segmental Defects in Sheep," Fifth World Biomaterials Congress, May 29-June 2, Toronto, Canada.		
	Glimcher et al., "Recent studies of the mineral phase in bone and its possible linkage to the organic matrix by protein-bound phosphate bonds", Phil. Trans. R. Soc. Lond., B 304:479-508, 1984.		
	Glimcher et al., "Recent Studies of Bone Mineral: Is the Amorphous Calcium Phosphate Theory Valid?" J. Crystal Growth, 53: 100-119 (1981).		
	Graves et al., "Resorbable Ceramic Implants", J. Biomed. Mater. Res. Symposium, No. 2 (Part 1), pp. 91-115 (1971).		
	Greenfield et al., "Formation chemistry of amorphous calcium phosphates prepared from carbonate containing solutions", Calc. Tiss. Res., 9:152 (1972).		
	Hirasawa et al., "Manufacture of high purity hydroxyapatite," Chemical Abstracts, 108 (10), p. 166, no. 78193h (March 7, 1988).		
	Holmes et al., "Surface areas by gas adsorption on amorphous calcium phosphate and crystalline hydroxyapatite", Calc. Tiss. Res., 7:163 (1971).		
	Ishikawa et al., "Effects of preparation in aqueous solution on properties of hydroxyapatites", Dent. Mater. J. 9(1):58 (1990) [CA 113:218168j] (Abstract)		
	Jones et al., "Poly [L-Lactide] and Poly [L-Lactide] Ceramic Filled Composites: A Long Term in vivo/in vitro Degradation Study," Fifth World Biomaterials Congress, May 29-June 2, 1996, Toronto, Canada.		
	Kamei et al., "Implantation of hydroxyapatite-bonded polymer," Fifth World Biomaterials Congress, May 29-June 2, 1996, Toronto, Canada.		
	Kim et al., "Hyaluronan Based Biodegradable Scaffolds for Skeletal Tissue Reconstruction," Fifth World Biomaterials Congress, May 29-June 2, 1996, Toronto, Canada.		
	Kishimoto et al., "Reconstruction of Mandibular Discontinuity Defects in Dogs using Autogenic Particulate Cancellous Bone and Marrow and Poly(L-lactide) mesh," Fifth World Biomaterials Congress, May 29-June 2, 1996, Toronto, Canada.		

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<i>M</i>	Labarthe et al., "Sur la structure et les propriétés des apatites carbonatées de type B phospho-calciques", Ann. Chem., 8:289 (1973).			
	Ladizesky et al., "Hydrostatic Extrusion of Hydroxyapatite Polyethylene Composite", Fifth World Biomaterials Congress, May 29-June 2, 1996, Toronto, Canada.			
	Liu et al., "Nano-Apatite/Polymer Composites II. Surface Modification of Nano-Apatite by Grafting of Polyethylene Glycol," Fifth World Biomaterials Congress, May 29-June 2, 1996, Toronto, Canada.			
	Nylen et al., "Molecular and ultrastructural studies of non-crystalline calcium phosphates", Calc. Tiss. Res., 9:95 (1972).			
	Oka et al., "Development of Artificial Osteo-Chondral Composite Material," Fifth World Biomaterials Congress, May 29-June 2, 1996, Toronto, Canada.			
	Otsuka et al., "Effect of particle size of metastable calcium phosphates on mechanical strength of a novel self-setting bioactive calcium phosphate", J. Biomed Mat. Res., 29:25 (1995).			
	Pool, "Coral chemistry leads to human bone repair", Science, 269:1772 (March, 1995).			
	Posner et al., "Synthetic amorphous calcium phosphate and its relation to bone mineral structure", Bone Mineral Structure, 8:273-281 (1975).			
	Rey et al., "The carbonate environment in bone mineral: a resolution-enhanced fourier transform infrared spectroscopy study", Calcif. Tissue Int., 45:157 (1989).			
	Rey et al., "Structural studies of the mineral phase of calcifying cartilage", J. Bone Min. Res., 6:515 (1991).			
	Rey et al., "Preparation of Microporous Ceramic at Low Temperature from Poorly Crystalline Apatite", Symposium Abstract, 1993.			
	Rizkalla et al., "Effect of Composition on Strength of Bioactive Composites," Fifth World Biomaterials Congress, May 29-June 2, 1996, Toronto, Canada.			
	Saifullin, R.S., "Physical Chemistry of Inorganic Polymeric and Composite Materials", Chapter 1: Introduction, Ellis Horwood, New York.			
<i>↓</i>	Selmani et al., "Bioerodible Polyester Foams for Orthopaedic Tissue Culture," Fifth World Biomaterials Congress, May 29-June 2, 1996, Toronto, Canada.			

*Neil Ley**5/11/01*

Form PTO-1449 (REV. 8-83)		U.S. Department of Commerce Patent and Trademark Office	Atty. Docket 04712/02000G	In re Application No. 09/284,297
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<i>M</i>	Termine et al., "Amorphous/Crystalline Interrelationships in Bone Mineral", Calc. Tiss. Res. 1, 8-23 (1967).			
<i>JW</i>	Törmälä, P., "Biodegradable Self-Reinforced Composite Materials; Manufacturing Structure and Mechanical Properties", Clinical Materials 10:29-34 (1992).			
<i>M</i>	Tung et al., "An intermediate state in hydrolysis of amorphous calcium phosphate", Calcif. Tissue Int., 35:783 (1983).			
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.				

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(37 CFR §1.98(b))						
PATENT & TRADEMARK OFFICE						
Examiner's Initials	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date (If Appropriate)
<i>M</i>	4,429,691	02/07/84	Niwa et al.			
	4,698,375	10/06/87	Dorman et al.			
	4,713,076	12/15/87	Draenert et al.			
	4,722,948	02/02/88	Sanderson et al.			
<i>M</i>	5,007,930	04/16/91	Dorman et al.			
FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION						
Examiner's Initials	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation (Yes/No)
<i>M</i>	EP 0 520 690	12/30/92	Europe			
OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION)						
<i>M</i>	Boskey, Adele I., "Matrix Proteins and Mineralization: An Overview", <i>Connect. Tiss. Res.</i> , 35, (1-4):357-363 (1997).					
	Butterman, et al., "The use of bone allografts in the spine", <i>Clinic, Orthoped. Rel. Res.</i> , 324: 75 (1996).					
	Crowley, et al., "Prostheses for primary total hip replacement", <i>Int'l. J. Technol. Assess. Health Care</i> , 11(4): 770 (1995).					
	Denissen et al., "Net-shaped hydroxyapatite implants for release of agents modulating periodontal-like tissues", <i>J. Periodontal Res.</i> , 32:40-46 (1997).					
<i>V</i>	Ducheyne, et al., "Advanced Series in Ceramics, Vol. 1,; "Introduction to Bioceramic Composites", L. Hench and J. Wilson, Eds World Scientific New Jersey.					
EXAMINER	<i>Menday</i>		DATE CONSIDERED	<i>5/11/01</i>		
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(37 CFR §1.98(b))						
U.S. PATENTS						
Examiner's Initials	Patent Number	Issue Date	Patentee		Class	Subclass
M	5,019,379	05/28/91	Domb et al.			
M	5,049,157	09/17/91	Mittelmeier et al.			
	5,264,215	11/23/93	Nakabayashi et al.			
	5,286,763	02/15/94	Gerhart et al.			
	5,342,441	08/30/94	Mandal et al.			
	5,352,715	02/28/92	Wallace et al.			
FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION						
Examiner's Initials	Document Number	Publication Date	Country or Patent Office		Class	Subclass
OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION)						
M	Frils, et al., "Fracture Toughness of Surface-Treated Carbon Fiber Reinforced Composite Bone Cement", <i>Fifth World Biomaterials Congress</i> , Toronto, Canada May 29-June 2, 1996.					
M	Hubbell, "Biomaterials in tissue engineering", Bio/technology, 13:56, (1995).					
M	Thissen et al., "Surface modification of biodegradable polymers by plasma induced graft polymerization", <i>Fifth World Biomaterials Congress</i> , Toronto, Canada May 29-June 2, 1996.					
EXAMINER	<i>Metzler</i>		DATE CONSIDERED		<i>5/11/07</i>	
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with the next communication to applicant.						

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INFORMATION DISCLOSURE STATEMENT		Applicant: Lee et al.	
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U. S. PATENT DOCUMENTS			

PTO
FEB 15 2000
106-2000

Examiner's Initials	U.S. Patent No.	Applicant	Issue Date	Class	Subclass
M	4,684,673	Adachi	August 4, 1987	523	116
	5,262,166	Liu et al.	November 16, 1993	424	423
	5,281,265	Liu	January 25, 1994	106	35
	5,427,754	Nagata et al.	June 27, 1995	423	308
	5,516,532	Atala et al.	May 14, 1996	424	548
	5,565,502	Glimcher et al.	October 15, 1996	523	115
	5,665,120	Ohtsuka et al.	September 9, 1997	623	16
	5,691,397	Glimcher et al.	November 25, 1997	523	115
V	5,700,289	Breitbart et al.	December 23, 1997	623	16
M	5,782,971	Constanz et al.	July 21, 1998	106	690

FOREIGN PATENT DOCUMENTS

Examiner's Initials	Document No.	Country	Date	Translation	
				Yes	No
	WO 94/08458	International	April 28, 1994	✓	

OTHER DOCUMENTS
(Including Author, Title, Date, Pertinent Pages, Etc.)

M	Barton, et al., "Surface and Bulk Properties of Amorphous Calcium Phosphate", Colloid Interface Sci., 50th Proceeding Int'l Conf. 3:71(1976) CA:87:73954v
M	Basic, et al., "Electron Probe Microanalysis of Noncarious Enamel and Dentin and Calcified Tissues in Mottled Teeth", J. Dent. Res. 48: 131, Jan-Feb, 1969
M	Constanz, et al., "Skeletal Repair by in Situ Formation of the Mineral Phase of Bone", Science, 267:1976, (March, 1995.)

Merlees 5/18/07